ISTEP+ Grade 10
Released Items
Mathematics Part 1
The coordinate grid shows two points of a function.

Part A
If the function is linear, name the coordinates of the x-intercept of the function. Use words, numbers, and/or symbols to explain your answer.

Answer ( , )

Part B
If the function is quadratic and has a vertex at the point (-5, 6), what are the coordinates of a third point on the parabola? Use words, numbers, and/or symbols to explain how you found your answer.

Show All Work

Answer ( , )
Use the information provided to answer Part A and Part B.

A ball is dropped from a height of 100 feet. The height of the ball can be determined using the equation \( h = -16t^2 + 100 \), where \( h \) is the height, in feet, and \( t \) is the time, in seconds.

**Part A**

What is the value of \( h \) if \( t = 1 \)? Show the process for determining the value of \( h \).

**Show All Work**

**Part B**

If \( h = 0 \), find all the values of \( t \) and determine whether the values are reasonable for this situation.

**Show All Work**
A rectangle with an area of 104 square inches has a width that is 5 inches less than its length.

**Part A**
Write an equation representing the area of the rectangle. Use $x$ to represent the length of the rectangle. Solve your equation for all values of $x$.

**Show All Work**

**Part B**
Use your solution to the equation to identify the width and length of the rectangle. Explain how you determined which value(s) of $x$ to use.

**Show All Work**